IBM 50 GB and 200 GB SATA 1.8-inch MLC SSDs offer a high-performance SATA storage device for System x servers

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At a glance

The new 1.8-inch form-factor drives provide solid state technology for IBM® System x® and IBM BladeCenter®.

Benefits include:

- Larger, 50 GB and 200 GB capacity for the single drive to accommodate loading applications along with OS booting
- Help in reducing potential points of failure internal to the blade server by delivering solid state reliability in the IBM storage family
- 1.8-inch, slim-line form factor that fits into a conventional disk drive bay
- Energy saving with as little as 2.3-watt power consumption per drive
- S.M.A.R.T. Technology, which, through the use of software utilities, can alert you of certain impending drive failures
- One-year limited warranty

Overview

The new IBM 50 GB and 200 GB SATA 1.8-inch MLC SSDs bring solid state high performance, reliability, and low-power capabilities to BladeCenter and System x storage. The new 50 GB and 200 GB SSD drives will each be available as a single 1.8-inch mulitlevel cell (MLC) drive.

Key features and benefits include:

- Low power requirements (2.3 watts per drive) help you better manage the power envelope of the datacenter.
- Uptime is up to three times that of conventional hard drives without compromising application performance or availability.
- Durability helps withstand challenging environmental conditions.
- These drives are ideal for local boot usage and web serving applications, and in environments where application data is accessed in external storage.

Performance

50 GB performance characteristics include:

- Formatted capacity: Up to 50,000 MB
- Drive to host interface that supports 3.0 Gb/s burst rate

- Internal transfer read rate: Up to 140 MB/s
- Internal transfer write rate: Up to 18 MB/s
- Random read (4K blocks): Up to 20,000 IOPS

200 GB performance characteristics include:

- Formatted capacity: Up to 200,000 MB
- Drive to host interface that supports 3.0 Gb/s burst rate
- Internal transfer read rate: Up to 150 MB/s
- Internal transfer write rate: Up to 35 MB/s
- Random read (4K blocks): Up to 20,000 IOPS

Reliability

- The absence of moving parts reduces potential failure points in the blade server.
- SATA compliance enables the drive to connect directly into an IBM BladeCenter.
- S.M.A.R.T Technology allows software utilities to alert you of certain impending drive failures so replacements can be made before a problem occurs.
- Rigorous testing through the ServerProven® program instills confidence that your storage subsystem is compatible and will function reliably.
- These SSD drives come with a one-year, limited warranty[1].

[1] For information on the IBM Statement of Limited Warranty, visit

http://www.ibm.com/systems/support

Alternatively, this information is available through your IBM representative or reseller. Copies are available upon request.

With respect to on-site service, IBM sends a technician after attempting to diagnose and resolve the problem remotely.

Key prerequisites

IBM System x or BladeCenter system with SATA capability

Planned availability date

April 25, 2011

Description

IBM 50 GB SATA 1.8-inch MLC Solid State Drive (43W7726) and 200 GB SATA 1.8-inch SSD (43W7746)

These new drives bring solid state reliability and low-power capabilities to on-blade storage. These new options will be available as single 1.8-inch MLC 2.3-watt drives.

Configurator support

- Configuration and Options Guide (COG)
- IBM Advanced Solutions Integration Tool (ASIT)

Product positioning

The high-performance 50 GB and 200 GB SATA SSD options are positioned at the top of IBM's SATA SSD line based on solid state technology.

These SSD drives support entry-level server and workstation applications, such as:

- Transaction processing
- Data mining
- Data warehousing
- Professional video and graphics

Product number

Single Entity Offerings (SEOs)

Description	SEO number
IBM 50 GB SATA 1.8-inch MLC SSD	43W7726
IBM 200 GB SATA 1.8-inch MLC SSD	43W7746

The following features are already announced for the 7145, 7148, 7871, and 7872 machine types:

Description	MT	Model	Feature
IBM 200GB SATA 1.8" MLC SSD	7145	AC1	5420
		AC3	
		AC4	
		MC1	
		MC3	
		MC4	
IBM 200GB SATA 1.8" MLC SSD	7148	AC1	
		AC3	
		AC4	
		MC1	
		MC3	
		MC4	
IBM 200GB SATA 1.8" MLC SSD	7871	AC1	
		MC1	
IBM 200GB SATA 1.8" MLC SSD	7872	AC1	
		AC3	
		AC4	
		MC1	
		MC3	
		MC4	
IBM 50GB SATA 1.8" MLC SSD	7145	AC1	5428
		AC3	
		AC4	
		MC1	
		MC3	
		MC4	
IBM 50GB SATA 1.8" MLC SSD	7148	AC1	
		AC3	
		AC4	
		MC1	
		MC3	
		MC4	
IBM 50GB SATA 1.8" MLC SSD	7871	AC1	
		MC1	
IBM 50GB SATA 1.8" MLC SSD	7872	AC1	
		AC3	
		AC4	
		MC1	

MC3
MC4

Business Partner information

If you are a Direct Reseller - System Reseller acquiring products from IBM, you may link directly to Business Partner information for this announcement. A PartnerWorld® ID and password are required (use IBM ID).

https://www.ibm.com/partnerworld/mem/sla.jsp?num=111-074

Publications

Publications are shipped with the announced product.

The IBM Systems Information Center provides you with a single information center where you can access product documentation for IBM systems hardware, operating systems, and server software. Through a consistent framework, you can efficiently find information and personalize your access. The IBM Systems Information Center is at

http://publib14.boulder.ibm.com/infocenter/systems

IBM Publications Center Portal

http://www.ibm.com/shop/publications/order

The Publications Center is a worldwide central repository for IBM product publications and marketing material with a catalog of 70,000 items. Extensive search facilities are provided, as well as payment options via credit card. A large number of publications are available online in various file formats, which can currently be downloaded free of charge.

Displayable softcopy publications

None

Source file publications

None

Services

Global Technology Services

IBM services include business consulting, outsourcing, hosting services, applications, and other technology management.

These services help you learn about, plan, install, manage, or optimize your IT infrastructure to be an on-demand business. They can help you integrate your high-speed networks, storage systems, application servers, wireless protocols, and an array of platforms, middleware, and communications software for IBM and many non-IBM offerings. IBM is your one-stop shop for IT support needs.

For details on available services, contact your IBM representative or visit

http://www.ibm.com/services/

For details on available IBM Business Continuity and Recovery Services, contact your IBM representative or visit

http://www.ibm.com/services/continuity

For details on education offerings related to specific products, visit

http://www.ibm.com/services/learning/index.html

Select your country, and then select the product as the category.

System x and BladeCenter support services

Recommended core technical support

When you buy IBM System x technology, include the support services you need -- to help keep both your hardware and software working for you, day after day, at peak performance. It's your first step toward helping to protect your investment and sustain high levels of system availability. We offer service-level and response-time options to fit your business needs. And we'll help you get started with a core support package that includes:

- **Continuous system monitoring**

  Electronic monitoring that helps speed up problem-solving with automated, early detection of potential problems and system errors.

- **Hardware maintenance**

  World-class remote and on-site hardware problem determination and repair services.

- **Software technical support**

  Access to help line calls for fast, accurate answers to your questions during installation and throughout ongoing operations.

For more information, visit

http://www.ibm.com/servers/eserver/xseries/services.html

Technical information

Specified operating environment

Physical specifications

IBM 50 GB SATA 1.8-inch MLC SSD - 43W7726

- Approximate height: 5.35 mm (.21 in)
- Approximate width: 54.2 mm (2.14 in)
- Approximate depth: 70.0 mm (2.76 in)
- Approximate weight: <448 gms (<1 lb)

Shipping dimensions

- Height: 5.35 mm (.21 in)
- Width: 54.2 mm (2.14 in)
- Depth: 70.0 mm (2.76 in)
- Weight: <448 gms (<1.0 lb)

IBM 200 GB SATA 1.8-inch MLC SSD - 43W7746

- Approximate height: 5.35 mm (.21 in)
- Approximate width: 54.2 mm (2.14 in)
- Approximate depth: 70.0 mm (2.76 in)
- Approximate weight: <448 gms (<1 lb)

Shipping dimensions

- Height: 5.35 mm (.21 in)
- Width: 52.4 mm (2.14 in)
- Depth: 70.0 mm (2.76 in)
- Weight: <448 gms (<1.0 lb)

Agency approvals

- UL
- CSA
- TUV
- CE Mark
- C-Tick Mark
- IEC
- Taiwan (BSMI Certification)
- Korea EMI

Standards

None

Operating environment

Temperature: - 0 to 70 degrees C (32 to 158 degrees F) at 0 to 914 m (0 to 3,000 ft)

Relative humidity: 5% to 90% (noncondensing)

Maximum altitude: 24,390 m (80,000 ft)

Hardware requirements

The HDDs must be installed in selected System x or BladeCenter servers.

Software requirements

The new IBM 50 GB and 200 GB SATA SSDs work with most operating systems.

For further information, contact your IBM representative.

Compatibility

For latest compatibility information, visit

http://www.ibm.com/servers/eserver/serverproven/compat/us/

Note: Some configurations may not be compatible.

Limitations

None

User group requirements

This announcement satisfies or partially satisfies the requirements from one or more of the worldwide user group communities. Groups include COMMON, COMMON Europe, Guide Share Europe (GSE), InterAction (Australia/New Zealand), Japan Guide Share (JGS), and SHARE Inc.

Planning information

Customer responsibilities

The new IBM 50 GB and 200 GB SATA 1.8-inch MLC SSD products are designated as customer setup. Customer installation instructions are shipped with each option part.

Cable orders

None

Installability

The IBM 50 GB or 200 GB SATA SSD require about 20 minutes for installation.

Installation includes unpacking, attaching customer-provided line cord, setting up, and powering on.

Packaging

IBM 50 GB and 200 GB SATA 1.8-inch MLC SSD

Product	Package description	Boxes
IBM 50 GB SATA 1.8-inch MLC SSD IBM 200 GB SATA 1.8-inch MLC SSD	Option Unit Box Contents: Hard drive Installation pub and warranty Safety flyer	1

The 50 GB and 200 GB SATA SSDs are shipped as a single package. Other items are in zipped bags.

Retail only

Packaging dimensions and weight - 50 GB SSD (43W7726)

- Single box (HxWxD): 133 mm (5.23 in) x 174 mm (6.85 in) x 63 mm (2.48 in)
- Package weight: 808 g (1.8 lb)

Retail only

Packaging dimensions and weight - 200 GB SSD (43W7746)

- Single box (HxWxD): 133 mm (5.23 in) x 174 mm (6.85 in) x 63 mm (2.48 in)
- Package weight: 808 g (1.8 lb)

Note: All measurements are approximate.

Supplies

IBM 50 GB and 200 GB SATA 1.8-inch MLC SSDs can be purchased through dealers around the world.

Security, auditability, and control

It is a customer's responsibility to ensure that the server is secure to prevent sensitive data from being removed.

The customer is responsible for evaluation, selection, and implementation of security features, administrative procedures, and appropriate controls in application systems and communications facilities.

IBM Electronic Services

IBM has transformed its delivery of hardware and software support services to help you achieve higher system availability. Electronic Services is a web-enabled solution that offers an exclusive, no-additional-charge enhancement to the service and support available for IBM servers. These services are designed to provide the opportunity for greater system availability with faster problem resolution and preemptive monitoring. Electronic Services comprises two separate, but complementary, elements: Electronic Services news page and Electronic Services Agent.

The Electronic Services news page is a single Internet entry point that replaces the multiple entry points traditionally used to access IBM Internet services and support. The news page enables you to gain easier access to IBM resources for assistance in resolving technical problems.

The Electronic Service Agent™ is no-additional-charge software that resides on your server. It monitors events and transmits system inventory information to IBM on a periodic, client-defined timetable. The Electronic Service Agent automatically reports hardware problems to IBM. Early knowledge about potential problems enables IBM to deliver proactive service that may result in higher system availability and performance. In addition, information collected through the Service Agent is made available to IBM service support representatives when they help answer your questions or diagnose problems. Installation and use of IBM Electronic Service Agent for problem reporting enables IBM to provide better support and service for your IBM server.

To learn how Electronic Services can work for you, visit

http://www.ibm.com/support/electronic

Terms and conditions

Field installable features

Yes

Option warranty period

One year.

50 GB and 200 GB SATA 1.8-inch MLC SSDs offer a one-year warranty[1].

- Warranty Period: One year
- Service Type (IOR/IOE/CCE/CCR): CRU
- Maintenance Agreement: No
- Optional Upgrade: No

An IBM part or feature installed during the initial installation of an IBM machine is subject to a full warranty effective on the date of installation of the machine. An IBM part or feature that replaces a previously installed part or feature assumes the remainder of the warranty period for the replaced part or feature. An IBM part or

feature added to a machine without replacing a previously installed part or feature is subject to a full warranty effective on its date of installation. Unless specified otherwise, the warranty period, type of warranty service, and service level of a part or feature are the same as those for the machine in which it is installed.

Customer setup

Yes.

Machine code

No license terms apply.

Pricing

For current prices, contact IBM at 888-Shop-IBM (746-7426) or visit

http://www-03.ibm.com/systems/x/

Description	Part number
IBM 50 GB SATA 1.8-inch MLC SSD	43W7726
IBM 200 GB SATA 1.8-inch MLC SSD	43W7746

Field install only	Plant install only	MES removal	Cables required
N	N	N	N

If field installed on a purchased machine, parts removed or replaced become the property of IBM and must be returned.

The following features are already announced for the 7145 machine type:

Description	Model number	Feature number	Initial/ MES/ Both support	CSU	RP MES
IBM 200GB SATA 1.8" MLC SSD					
	AC1	5420	Initial		
	AC3		Initial		
	AC4		Initial		
	MC1		Initial		
	MC3		Initial		
	MC4		Initial		
IBM 50GB SATA 1.8" MLC SSD					
	AC1	5428	Initial		
	AC3		Initial		
	AC4		Initial		
	MC1		Initial		
	MC3		Initial		
	MC4		Initial		

The following features are already announced for the 7148 machine type:

Description	Model number	Feature number	Initial/ MES/ Both support	CSU	RP MES
IBM 200GB SATA 1.8" MLC SSD					
	AC1	5420	Initial		
	AC3		Initial		

			AC4		Initial
			MC1		Initial
			MC3		Initial
			MC4		Initial
IBM 50GB SATA 1.8" MLC SSD					
			AC1	5428	Initial
			AC3		Initial
			AC4		Initial
			MC1		Initial
			MC3		Initial
			MC4		Initial

The following features are already announced for the 7871 machine type:

Description	Model number	Feature number	Initial/ MES/ Both support	CSU	RP MES
IBM 200GB SATA 1.8" MLC SSD					
	AC1	5420	Initial		
	MC1		Initial		
IBM 50GB SATA 1.8" MLC SSD					
	AC1	5428	Initial		
	MC1		Initial		

The following features are already announced for the 7872 machine type:

Description	Model number	Feature number	Initial/ MES/ Both support	CSU	RP MES
IBM 200GB SATA 1.8" MLC SSD					
	AC1	5420	Initial		
	AC3		Initial		
	AC4		Initial		
	MC1		Initial		
	MC3		Initial		
	MC4		Initial		
IBM 50GB SATA 1.8" MLC SSD					
	AC1	5428	Initial		
	AC3		Initial		
	AC4		Initial		
	MC1		Initial		
	MC3		Initial		
	MC4		Initial		

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